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Rationale and Criteria Required for Norovirus Testing

Noroviruses, a member of the family of human caliciviruses, are a common cause of outbreaks of gastroenteritis in people of all ages. Noroviruses are commonly associated with foodborne outbreaks attributed to ill food handlers and with person-to-person outbreaks in schools, nursing homes and cruise ships. Historically, the number of outbreaks of norovirus-related illness reported in Wisconsin peaks in the fall and winter.

The illness is characterized by nausea with vomiting, diarrhea, cramps, body aches and chills. Children present most often with vomiting, and adults present more often with diarrhea. The typical incubation period of the disease is usually 24 to 36 hours, but may range from 10 to 96 hours. The illness is self-limiting and symptoms usually end in 2 to 3 days. There are no specific treatments for norovirus infections other than rest and fluid replacement. Because of the large numbers of viral particles that can be shed and the low infectious dose (as few as 10 to 100 particles), noroviruses are highly infectious and secondary cases of illness among family members is common.

Because of recent press coverage of norovirus-related outbreaks occurring on cruise ships and in hospitals, there has been heightened awareness of these illnesses and a tremendous increase in requests for NLV testing for persons with gastrointestinal illness in Wisconsin. This has resulted in a large number of requests being made to the Wisconsin State Laboratory of Hygiene (WSLH) because it is the only laboratory in Wisconsin that performs the molecular test required to identify noroviruses.

The Bureau of Communicable Diseases, Wisconsin Division of Public Health (WDPH) works closely with the WSLH to coordinate and approve the testing of stool specimens for noroviruses. The only specimens that will be approved for testing have to meet the following requirements:

1. The specimens must be from a "defined" outbreak. This would be defined by the local health department or WDPH when two or more unrelated cases of gastrointestinal illness occur from a common exposure. Sporadic cases are not tested because norovirus illness is not a reportable disease. Further, the test for noroviruses is very time-consuming and expensive, and most illnessess will have resolved by the time the results return. In addition, there is no specific treatment, so there is little information of clinical value to be

- obtained from a positive test for an individual patient. However, testing does provide valuable information regarding the spread of noroviruses during outbreaks.
- 2. The WDPH will cover the cost of the testing of up to 10 stool specimens under the "fee exempt" system set up for local health departments. The "fee exempt" testing resources has limited funds. Therefore the WSLH is limited to the numbers of tests that can be performed. Also, it is not necessary to test more than 10 stool specimens to identify the source of any outbreak, with the possible exception of outbreaks involving highly susceptible populations (e.g., hospitals), when contact investigation and timely application of control measures are critical.

For more information please call John Archer at (608) 267-9009 or refer to the WDPH Disease Fact Sheet: "*Noroviris*" on the Internet at: www://dhfs.state.wi.us/healthtips/BCD/Norwalk.htm.

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